

We claim:

1. Film forming compositions consisting of modified starches, such as starch ethers or oxidized starch, more particularly hydroxypropylated starch or hydroxyethylated starch and a setting system.
2. Film forming compositions according to claim 1, wherein the setting system consists of hydrocolloids and cations.
3. Film forming compositions according to claim 1, wherein the setting system contains optionally sequestering agents.
4. Film forming compositions according to claim 1, wherein the content of hydroxypropylated starch is 88 to 98% by weight, of water is 2 to 12% by weight, of polysaccharides is 0.01 to 10%, preferably 0.05 to 5% by weight and of cation is 0.001 to 5%, preferably 0.01 to 3% by weight.
6. Film forming compositions according to claim 1, wherein the hydrocolloids of the setting system are selected from polysaccharides.
7. Film forming compositions according to claim 1, wherein the hydrocolloids of the setting system are selected from alginates, agar gum, guar gum, locust bean gum (carob), carrageenan, tara gum, gum arabic, ghatti gum, Khaya grandifolia gum, tragacanth gum, karaya gum, pectin, arabian (araban), xanthan, gellan, starch, Konjac mannan, galactomannan, or funoran.

8. Film forming compositions according to claim 1,
wherein the hydrocolloids of the setting system are
selected from exocellular polysaccharides.
- 5 9. Film forming compositions according to claim 1,
wherein the hydrocolloids of the setting system are
selected from xanthan, acetan, gellan, welan,
rhamsan, furcelleran, succinoglycan, scleroglycan,
schizophyllan, tamarind gum, curdlan, pullulan, or
dextran.
- 10 10. Film forming compositions according to claim 1,
wherein the hydrocolloids of the setting system are
selected from gellan gum or kappa-carrageenan.
- 15 11. Film forming compositions according to claim 1,
wherein the optional sequestering agent or mixture of
sequestering agents of the setting system is selected
from ethylenediaminetetraacetic acid, acetic acid,
boric acid, citric acid, edetic acid, gluconic acid,
lactic acid, phosphoric acid, tartaric acid or salts
thereof, methaphosphates, dihydroxyethylglycine,
20 lecithin or beta cyclodextrin.
- 25 12. Film forming compositions according to claim 11,
wherein the sequestering agent or mixture of
sequestering agents is selected from
ethylenediaminetetraacetic acid or salts thereof or
citric acid or salts thereof.
13. Film forming compositions according to claim 1
containing additionally plasticizers in a range from
about 0 to 40 % based upon the weight of the
composition.

14. Film forming compositions according to claim 13
wherein the plasticizer or mixture of plasticizers is
selected from polyethylene glycol, glycerol,
sorbitol, sucrose, corn syrup, fructose, dioctyl-
5 sodium sulfosuccinate, triethyl citrate, tributyl
citrate, 1,2-propylenglycol, mono-, di- or
triacetates of glycerol, or natural gums.
15. Film forming compositions according to claim 1
containing additionally colouring agents in a range
10 from about 0 to 10 % based upon the weight of the
composition.
16. Film forming compositions according to claim 15
wherein the colouring agent or mixture of colouring
agents is selected from azo-, quinophthalone-,
15 triphenylmethane-, xanthene- or indigoid dyes, iron
oxides or hydroxides, titanium dioxide or natural
dyes.
17. Film forming compositions according to claim 16
wherein the colouring agent or mixture of colouring
20 agents is selected from patent blue V, acid brilliant
green BS, red 2G, azorubine, ponceau 4R, amaranth,
D+C red 33, D+C red 22, D+C red 26, D+C red 28, D+C
yellow 10, yellow 2 G, FD+C yellow 5, FD+C yellow 6,
FD+C red 3, FD+C red 40, FD+C blue 1, FD+C blue 2,
25 FD+C green 3, or brilliant black BN.
18. Film forming compositions according to claim 15
wherein the colouring agent or mixture of colouring
agents is selected from carbon black, iron oxide
black, iron oxide red, iron oxide yellow, titanium
30 dioxide, riboflavin, carotenes, anthocyanines,

turmeric, cochineal extract, chlorophyllin, canthaxanthin, caramel, or betanin.

- 5 19. Containers for unit dosage forms for agrochemicals, seeds, herbs, foodstuffs, dyestuffs, pharmaceuticals, or flavouring agents produced from the compositions according to claims 1 to 18.
20. Container according to claim 19 which is a pharmaceutical capsule.
- 10 21. Containers according to claim 19, characterised in that the container has a coating.
- 15 22. Coated containers according to claim 21 wherein the coating is selected from cellulose acetate phthalate, polyvinyl acetate phthalate, methacrylic acid gelatines, hypromellose phthalate, hydroxypropylmethyl cellulose phthalate hydroxyalkyl methyl cellulose phthalates or mixtures thereof.
23. Caplets encapsulated in film forming compositions according to claim 1.
- 20 24. Capsules according to claim 19 characterised in that the capsule halves are sealed with one or more layers of the composition according to claims 1 to 18.
- 25 25. Capsules according to claim 19 characterised in that a liquid fusion process seals the capsule halves.
26. Capsules according to claim 19 characterised by a release of filled product at low temperature, such as at room temperature.

27. Aqueous solutions of compositions according to claims 1 to 18 for the manufacturing of capsules.
28. Aqueous solutions according to claim 27, containing hydroxypropylated starch or hydroxyethylated starch in an amount of 10 to 60 %, preferably 20 to 40 % by weight, hydrocolloids in an amount of 0.01 to 5 %, preferably 0.03 to 1.0 % by weight and cations in an amount of 0.001 to 3 %, preferably 0.01 to 1 % by weight of the aqueous solution.
29. Aqueous solutions according to claim 27, containing optionally sequestering agents in an amount of 0.001 to 5 %, preferably 0.01 to 3 % by weight of the aqueous solution.
30. Use of aqueous solutions according to claim 27 for the manufacturing of hard capsules in a dip moulding process.
31. Manufacturing of hard capsules from aqueous hydroxypropylated starch solutions according to claims 27 to 29 in a dip moulding process with conventional hard gelatine capsules process parameters and equipment.